Cold Bath

No. 19.

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No 68 1820 — E. de Cybenkina

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A Thesis.

Upon the use of the Cold Bath previous to the Cold Stage of Intermittents & during the Hot Stage of Fevers

The subject of this Dissertation, is to prove that the Cold Bath may be employed with advantage previous to the cold Stage of Intermittents, as well as during the Hot Stage of Fevers. It is obvious to every one that during the former state, there is every appearance of feeble, & reduced action; that the secretions are either languid or suspended, that the vital functions are irregular & impaired, and that the faculties of the mind are deprived of their accustomed energy: How the causes operate to produce this effect I will not enquire into; satisfied that if discovered it would advance the Science but little in relieving distressed humanity - and that Nature operates by laws peculiar to herself, concealing the essence and constitutional differences of her productions in the greatest obscurity. To us it will be the humble task to trace & notice these changes, and tho we cannot solve their difficulties, we can at least obviate their effects.

This will consist in exciting the actions of the system previous to the paroxysm, and the Cold Bath is I think subservient to this purpose.

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whatever suspends action or produces a diminution of it, effects such changes as disposes the system to take on a train of more vigorous & active operations. What this consists in has been supposed an increase of Irritability, which Haller supposed to reside in every muscular fibre, to be the principle on which stimuli acted, and which as it existed in a greater or less degree, produced contractions vigorous or feeble.

Upon going into a Bath suppose 43° Fahrenheit the action of the capillary vessels is diminished or ceases for a time, & the bloodvessels are reduced in their actions. Hence the skin becomes pale, and contracted, and loses its heat. hence a torpor and listlessness ensues, and hence results a diminution of sensibility, which is materially influenced by the circulation. But in emerging from it, the vessels in consequence of the change undergone, and the temperature of the atmosphere, increase in their action. the skin becomes more florid. a glow is felt over the body. the spirits are more animated. the eyes more expressive &c. all indicating a new & more vigorous circulation. The same ~~circumst~~ fact may be illustrated in various ways. Thus by immersing both arms in water. one into a vessel containing

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it of the temperature ~~higher th~~ of the body, the other into another 43° Fahrenheit, we will perceive a material difference when placed into water of a higher temperature than the body. In the one immersed in the cold water we find the action more increased something like an efflorescence to be diffused over it and pain not unfrequently is a consequence. whereas in the other these effects are by no means equal in degree. Thus also the hands when ~~benumb~~ benumbed with cold are excited by the application of heat to an action accompanied with a sense of distension, heat & every appearance of increased ~~action~~ energy greater than would been produced by heat simply without the previous exposure to cold. And from this results chilblains which is nothing more than local inflammation.

Thus also when a limb is exposed so as to be frozen, the most cautious application of heat is necessary, to restore it to its healthy temperature.

The preceding principles receive weight from the authority of Sydenham. When reaction is moderate he says the effects are salutary to the system - but when the degree of heat which succeeds to cold is great then we observe inflammatory complaints.

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to ensue. Thus warm weather succeeding a sudden frost produces pleurisies, quinsies and other inflammatory complaints, whatever may be the general constitution of the year.

These effects may be extended further than is commonly imagined. They are applicable to explain the phenomena of the vegetable kingdom. Thus vegetation is more rapid in the Spring than at any other season. thus the sap ascends more rapidly in the morning than at noon, more so when a warm day succeeds a cold one.

These facts are incontestible in my opinion. and evidently pointing out that by the agency of cold (applied in the manner mentioned) something is accumulated in the animal and vegetable systems by which they are disposed to be excited into greater activity upon stimuli being subsequently applied.

But it may happen that from the violence of the Remote causes of Intermittent Fevers or from the actions of the system being linked together by morbid association. that the reaction which succeeds from the bath, is not sufficiently powerful to dissolve them and an ague ensues. This does not invalidate the importance of the remedy, for it is not possible that one can be suited to every urgency. that will not have its salutary properties baffled

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occasionally by the more sturdy actions of disease. It will however have a importance cons in this state. It will under the operation of Stimulants necessary to its effect more certain & active. as was exemplified in the following case which I witnessed under the care of a medical friend.

A patient who had been subject to attacks of h. intermittent fever applied which the usual remedies did not succeed in relieving applied to my friend as stated. Finding his constitution not too much debilitated for the employment of the remedy it was administered before the expected paroxysm but was not equal to the exhalations formed of it. Pursuing however the same steps previous to the next it was now thought proper during the reaction of the system to employ some of those remedies which had faild before this preparatory measure had been employed. They were now found successful & the patient by suffering this practice to be continued two or three times has had no return.

Dr Physick has politely favoured me with the history of a case very analogous to the one I have mentioned. which was communicated to him by the Patient. He had long been afflicted with intermittent fever for which a variety of remedies were employed without success. Despairing of a cure he was at

with directed to plunge in very cold water before he expected the fit. He accordingly on a very cold day broke the ice which covered a very large vessel of water and bathed in it; he escaped that attack and has not had another. The gentleman ascribes the cure entirely to the cold water.

I now proceed to the Second Part of my subject which is to point out the propriety of the Cold Bath during the Hot Stage of Fever. That a peculiar state of the skin exists in Fever has been long known, & was noticed by Hoffman, Cullen, and others, who remarking its uniform existence have not failed to invest it with sovereign powers. But here under the influence of fancies, as warm, as numerous, have they mistaken effects for causes, and have ascribed to this state of the skin, the development, continuance & solution of fever. That such a state does exist no one will deny but that it is a symptom or attendant will be admitted by the less speculative physicians of the present day. Divested thus of the dignity it has assumed in we will attach it as any other and instead of suffering it to languish under its unfavorable operations we will view it as susceptible of relief from the simple but indirectly

application of the remedy proposed.

It appears to me that too little attention has been paid to the state of the surface during the hot stage, and that if we will observe an agent which aggravates & prolongs the fever. That the Cold Bath is calculated to remove this condition which consists in a structure of the extreme vessels, and which is a barbarous fever that it is adapted to remove the morbid effect prevails it is the tenor of the following remarks to prove. My own inexperience prevents me from discriminating to what species of fever it is best adapted or to suggest its modifications in the several varieties, but as a general rule I believe states that it may with safety be employed when chillness present when the heat is dead to touch what is natural and when there is no sensible perspiration. Under these restrictions he says that it may be employed at any period of fever but its effects will be more salutary as it is employed early.

Let us institute an inquiry into the origin of the term fever. When the first impressions of our diseases and the commencement of disease then we should with be prodigious

increase of heat in some Hippocratic who studied life & disease in the book of Failure perceiving the increase of heat to be the most remarkable symptom found this to be a case and established his deductions upon the different degrees of intensenessh of this heat from its shining channels & other appearance it was natural to learn from this the dimensions & hence tables as hence to arise not

This being determined the problem was to discover the state of the system productive of this effect

At one time it was ascribed to the increased respiration and as animal heat is produced by the changes the air undergoes in the lungs by its new combinations this appears [illegible]

But as it was observed that [illegible]

[illegible] has been of a real use [illegible] the increased [illegible] [illegible]

Was attend to the phenomena [illegible]

[illegible] increase of [illegible] the skin, [illegible] tongue, [illegible] was [illegible] that there is a considerable heat and deep or sensation of a nature which cannot be measured [illegible] & as if it was parched and an absolutely unpleasant state of the [illegible] Coincident with this there is present great restlessness oppression about the precordia [illegible], [illegible], watching.

These symptoms are more or less connected with the nervous as stated by the [illegible] [illegible] the [illegible] [illegible] the [illegible] method is to restore the [illegible] of [illegible] [illegible] showing the [illegible] in this stage and hence [illegible] that [illegible] [illegible] and a [illegible] to relieve the [illegible] [illegible] application [illegible]

Let us see Dr Burnes success in alleviating this state of the system. By the use of this application he says the heat increased, diaphoresis was produced, the pulse moderated the mind became calm and collected & [illegible] [illegible] [illegible] restored rested

[illegible] taking this [illegible] out of bed [illegible] [illegible] [illegible] [illegible]

what her operations would have produced eventually

I have said that this state restrained perspiration - when I said it is conceivable to what a degree the heat of the body increases.. but when in action it is the most powerful agent in regulating the temperature of the body thus it is that the husbandman feels himself invigorated and refreshed while pursuing his necessary occupations thus it is that the inhabitant of the torrid zone, feels himself protected from the influence of a meridian he thus it is that he is [illegible] in which he may recruit the frame which has tortured and oppressed Recent experiments have evinced that an animal though exposed to heat elevated to the boiling point suffers no increase of its temperature provided that the secretion of perspiration continues

In fevers the action of the arterial system is often such as to be incompatible with secretion, here the bath may by reducing it, be admissable [illegible] This may be [illegible]ied by other diseased states In inflammation the excitement is sometimes

so great as to restrain that effusion which nature employs as a species of resolution and which nothing so directly induces as copious vena sect. In the state above alluded to it is common to employ diaphoretics but not with sufficient discrimination The end is held in view but the nature of the means employed is not adverted to. All medicines are stimulants, differing not only in the degree but in the kind of action operation If therefore we employ them we acting upon the principle those do who administer cordials in inflammation.

We either carry the action so far that the sweat which breaks out is partial and not beneficial or we sink the powers of the system. and then what ensues is too late to be advantageous.

How much more consistent first to employ the bath which by its operation diminishes heat and action as bleeding in inflammation and thus paves the way to recovery and health. or what is important to rational and consistent practice in the physician. Nature would have effected the same eventually and would have been much the superior of the two; but my object

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The reaction which I have mentioned as occurring after the bath will take place but then it will be salutary & beneficial. The heat and stricture are now removed. perspiration the moderator of the animal temperature has ensued this of course and the new action rather than exhausting tends to revive & invigorate the patient.

But unfortunately we have much to contend with before this can be employed as freely as necessary. Prejudice in medicine like quackery in science renders us alike bold and presumptuous.

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